



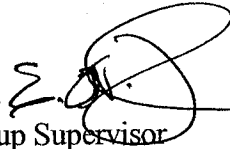
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

Memorandum

To: Environmental Partners

From: Earlene W. Thomas, PE 
Southeast Planning Group Supervisor
Transportation Planning Branch

Date: September 28, 2006

Re: Brunswick County Comprehensive Transportation Plan (CTP)

We look forward to working with each and every one of you on the development of the Brunswick County CTP. As a stakeholder in the development of this plan, the input that you provide will be invaluable to the final product that is developed. I am excited and believe that the coordinated effort of all stakeholders will not only shape the transportation needs of Brunswick County, but improve the quality of life for all NC citizens as well.

During this early stage in the process, we would like to solicit your input by providing a series of environmental features mapping that is readily available to the Transportation Planning Branch. We would like you to review these maps and provide feedback to us by pointing out areas of concern, such as those listed below. Please do not limit comments to the items below. They are only examples of the types of information we are seeking. Any information that you feel we should be aware of early in the process should be shared with us.

- Critical or sensitive areas that should be preserved or avoided.
- Information / data that we are missing and should be aware of. Please let us know where we can find the information.
- Is our information outdated? If so, where can we get the most updated information?
- Are there any critical changes expected to occur in the area?

Please feel free to mark / comment directly on the maps. Additionally, we are asking that you complete the information sheet provided so that we have contact information for future distribution purposes. Once you have completed your review, please forward all information to us in the envelope provided **no later than October 26, 2006.**

Environmental Protection Agency

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What are your concerns about the development that is occurring in Brunswick County?

SEE ATTACHED

Are there any other concerns that you would like to see addressed in the Brunswick County CTP?

SEE ATTACHED

Brunswick County Comprehensive Transportation Plan

1. Development concerns

From the various GIS databases it is very apparent that Brunswick County is ‘wet’; very wet. From past environmental work in this county extending back over a decade, Brunswick County has some of the ‘worst’ drainage of any county in North Carolina. From Exhibit C hydric soils mapping, 99% of the county is either Hydric Soil Type A or B. From first hand experience, Brunswick County floods several times a year and not solely from hurricane events. Brunswick County is bounded on a portion of its western boundary by the Waccamaw River. A portion of its northern boundary and its eastern boundary it is bounded by the Cape Fear River. Other major drainage features include the Shallotte River, Lockwood Folly River, Orton Creek, Allen Creek, Town Creek, and the Calabash River. The areas south and east of US 17 are riddled with Carolina bays. Many of these bays have been previously impacted by silvicultural draining activities (i.e., ditching) and there are few intact bays remaining.

Soils in Brunswick County are not conducive to septic systems. Package treatment facilities are too frequently not in compliance with discharge limits due to infiltration and inadequate capacity. Receiving waters are very sensitive (high quality waters) to pollutants and can cause severe environmental problems with regards to fish spawning areas. Exhibit D shows the high quality/outstanding resource waters and fish nursery areas. From Calabash to Southport, the entire Brunswick County coastline and numerous inlets are in this category. Almost exclusively, human development is incompatible with these special uses. Moreover, human activities such as unfettered littering and trash, introduction of aggressive exotic invasive species, herbicide, pesticide and other chemical applications, chemical spills and releases, etc., typically degrade wildlife habitat. There are numerous state and Federal species of concern and threatened and endangered species in Brunswick County. Their ultimate survival will depend greatly upon the ability to control development pressures and ‘environmentally unfriendly’ human activities.

Nonetheless, development pressures will continue in the county. “Swamp” land is relatively cheap, including those areas previously drained by timber companies. However, infrastructure costs are comparatively higher, including those utilities and facilities that require clean fill to raise them out of flood prone areas (e.g., Roadways). Cost-effective sources of clean backfill can be very difficult to find in this area of the State (9/15/06; NCDOT’s Greg Smith, PE, LG). NCDOT projects should be strictly prioritized to address current traffic problems. Future traffic models and projections based upon land use ‘build-out’ assumptions are not realistic based upon very severe environmental constraints. NCDOT projects should be planned as to address only current congestion and capacity issues. Proposed highway projects that have a purpose and need of ‘economic development’, ‘hurricane evacuation’ and ‘system linkage of commuter routes’ should be ‘tabled’ or placed at the bottom of the NCDOT’s priority list.

The Federal Government should also not ‘subsidize’ development through the construction of roadways in hurricane prone areas. Hurricanes Fran, Bertha, Floyd and

others in the 1990's destroyed thousands of homes and resulted in flooding damages to numerous roads. Aiding development efforts by 'improving' capacity of roadways will greatly add to the damages from future natural disasters and the enormous costs to rebuild. While in many areas of the North Carolina coastline development pressure is not contingent upon the expansion of the roadway infrastructure, in Brunswick County they are intricately linked (e.g., Second Bridge to Oak Island). The NCDOT's new roadways provide a 'free easement' for other utilities needed by developers, such as sewers, water lines, electric, cable, etc. Looking at the major roadway network for Brunswick County, it is apparent that the historic 'lack of roadways' (US 74/76, US 17, NC 87, NC 133, NC 211, NC 130, NC 904, NC 179) has kept a great deal of the county rural. 'Improving' this network will not reduce congestion (which for the most part is seasonal) but will ultimately add development and in turn increase roadway demands.

2. Other Concerns to be Addressed in the Brunswick County CTP

NCDOT should explore the use of 'Superstreets' along the two primary US routes (SHCs). NCDOT should discourage the use of bypasses around small communities and towns. Even with full control of access type facilities, bypasses can cause indirect and cumulative impacts with severe environmental damage to sensitive ecosystems. NCDOT right of ways are a breeding ground for exotic invasive plant species. In time, spraying weed control herbicides in areas with shallow ground water can also negatively impact ground and surface water sources. NCDOT should fully assess the cumulative effects of its projects on the natural ecosystem of Brunswick County, including the introduction and proliferation of exotic invasive plant species. These 'weeds' out compete native vegetation and can eliminate habitat for threatened and endangered plants and animal species. NCDOT should check with the NC Exotic Plant Pest Council, USDA and other agencies on the existence and spread of 'high risk/high threat' invasives (such as Kudzu, Chinese Privet, Japanese honeysuckle, Phragmites, Purple loosestrife, Japanese knotweed, etc.).

Army Corp of Engineers

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What are your concerns about the development that is occurring in Brunswick County?

- DIRECT, SECONDARY & CUMULATIVE IMPACTS
to WATERS OF THE U.S., INCLUDING WETLANDS.
- SPRAWL, DISJOINTED DEVELOPMENT

Are there any other concerns that you would like to see addressed in the Brunswick County CTP?

North Carolina Division of Coastal Management

I have reviewed the information provided in your memorandum of September 28, 2006 regarding the Brunswick County Comprehensive Transportation Plan (CTP). I was pleased to see that the GIS data represented in the package included areas of specific interest to the Division of Coastal Management (DCM) and the areas of interest of the agencies that typically comment on CAMA permit applications associated with NCDOT development projects. I would like to see specific references to the Brunswick County CAMA Land Use Plan in the CTP as well as GIS data representing land use. It would not be practical (or possible) to identify CAMA Areas of Environmental Concern (AECs) in the GIS data, but it might be helpful to include in the plan a description of AECs as found on our web site. I am available for future coordination in the development of the Brunswick County CTP.

Steve

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Steve Sollod
Transportation Project Coordinator
NC Division of Coastal Management

Name: Kathy Matthews
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What are your concerns about the development that is occurring in Brunswick County?

- Speed of development, particularly large subdivisions
- Is there a plan for growth in the County?
- Protecting water quality and water resources, during the planning process.

Are there any other concerns that you would like to see addressed in the Brunswick County CTP?

- Protection of dwindling aquatic and ecological resources.

Some of the data appears outdated (see list below).
However, I don't know where you can find more updated info.

- Water Distribution Systems (1998 or 2000)
- Shellfish Strata (1994)
- Endangered Species Habitats (1998)
- Land cover (1996)
- Fish nursery areas (1992)
- Shellfish harvesting areas (2000)
- (AMA permits (1991)
- Coastal Marinas (1992)
- Anadromous Fish (1995)

NAME: Travis W. Wilson

AGENCY: North Carolina Wildlife Resources Commission

MAILING ADDRESS: 1142 I-85 Service Road
Creedmoor, NC 27522

EMAIL ADDRESS: travis.wilson@ncwildlife.org

TELEPHONE#: 919-528-9886

1. Concerns about the development that is occurring in Brunswick County including concerns that should be addressed in the CTP.

- Habitat Fragmentation
- Removal of existing and potential Redcockaded woodpecker habitat.
- The current rate of development in Brunswick County insures that any new location roadway will in turn open access to undeveloped portions of the county. Public utilities are often installed with roadway construction, therefore completing the infrastructure for industrial, commercial, and high density residential developments to follow
- Invasive species spread and introduction.
- Current development trends are out pacing transportation planning; therefore potential and often environmentally preferred corridors are lost due to potential human impacts and/or cost associated with relocations.

2. GIS layer comments

- The WRC game lands file shown is out dated. The most recent Game Lands file is from July 2006, and can be downloaded from the nconemap.org
- Mitigation sites (NCDOT and EEP)
- All Natural Heritage Program files should be updated
- Need to include a shape file containing the Priority Areas for Freshwater Conservation as listed in the NC Wildlife Action Plan. This can be obtained from NCWRC, contact Carol Price, NC Wildlife Action Plan Coordinator at 919-707-0227.



North Carolina Department of Cultural Resources
State Historic Preservation Office

Peter B. Sandbeck, Administrator

Michael F. Easley, Governor
Lisbeth C. Evans, Secretary
Jeffrey J. Crow, Deputy Secretary

Office of Archives and History
Division of Historical Resources
David Brook, Director

November 17, 2006

MEMORANDUM

TO: Earlene W. Thomas
Southeast Planning Group Supervisor
NCDOT – Transportation Planning

FROM: Peter Sandbeck *Res for Peter Sandbeck*

SUBJECT: Brunswick County Comprehensive Transportation Plan (CTP), Brunswick County, ER 06-2561

Thank you for your Memorandum of September 28, 2006, concerning the above plan.

Brunswick County has not been surveyed to identify resources of historical or architectural interest since 1977. Therefore, any federal undertakings in Brunswick County will result in a request from us for an historic/architectural survey. This should be noted in your planning documents.

For your records, we are enclosing a list of Brunswick County historic resources that have been designated as either listed in the National Register, State Study-list, locally-landmarked or determined eligible for the National Register of Historic Places.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919/733-4763 ext. 246. In all future communication concerning this project, please cite the above referenced tracking number.

Enclosure

December 13, 2006

Ron Sechler
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In your letter requesting input on the preparation of the Brunswick County C (CTP), you listed "Critical or Sensitive" areas that should be preserved or avoided and provided a series of maps that depicted a wide range of environmental assets in Brunswick County. One "critical" asset that is not depicted on the enclosed maps is areas designated as essential fish habitat (EFH) for species managed by the South and Mid-Atlantic Fishery Management Councils (SAFMC, MAFMC) and the National Marine Fisheries Service (NMFS). We believe that the development of CTP for Brunswick County provides a unique opportunity to update the environmental maps for the county to include waters and wetlands designated as EFH. Identification of EFH by the NMFS would be accomplished cooperatively with the North Carolina Division of Marine Fisheries and when completed this information could be added as a data layer in the map products available to NCDOT. NMFS would like to discuss this opportunity further and I can be reached as noted above.

The NMFS has also responded to the questions included on page 3 of your letter:

What are your concerns about the development that is occurring in Brunswick County?

1. The NMFS understands that Brunswick County is beginning a period of rapid development including associated highway improvements. As a result, we are concerned that project specific and secondary/cumulative losses of waters and wetlands that support the fishery resources for which we are responsible will be substantial. NMFS is particularly concerned over losses of EFH described in the 1996 amendments to the Magnuson-Stevens Fisheries Conservation and Management Act. A specific concern is that rapid development, including highway development, will exacerbate losses of essential fish habitat (EFH) and degradation of water quality that is necessary for the continued production of species managed by the South and Mid Atlantic Fishery Management Councils and NMFS. NMFS shares management for many of the coastal and estuarine fishes found in Brunswick County and offshore waters with the state Division of Marine Fisheries, Wildlife Resources Commission and the Atlantic States Marine Fisheries Commission. A number of fishery resources found in Brunswick County are also identified pursuant to the Water Resources Development Act of 1996, as Aquatic Resource of National Importance.

2. To assist in addressing our EFH concern, we are providing a copy of a guidance document prepared by our Southeast Regional Office. Please note that this guidance is not comprehensive, but provides sufficient information to focus your efforts when EFH may be adversely impacted by highway projects component of the Brunswick County Comprehensive Transportation Plan (CTP). For detailed information of EFH and associated managed species, you should review relevant sections of the October 1998 Final Habitat Plan for the Southeast Region. We believe that a generic EFH assessment would be a useful planning component of the Brunswick County CTP

NMFS is also responsible (along with the state agencies identified above) for migratory diadromous fishes found in Brunswick County primarily in the Cape Fear River and tributaries of the Waccamaw River.

Forested wetlands associated with the rivers and streams in Brunswick County provide important habitat and water quality functions that are essential to the continued production of diadromous fishery resources (e.g., shad, river herring, Atlantic sturgeon, and striped bass. The Cape River also supports the endangered shortnose sturgeon for which our Protected Resources Division has management responsibility.

Are there any other concerns that you would like to see addressed in the Brunswick County Transportation Plan?

1. Anticipated growth and highway development in Brunswick County will also result in intense pressure by the housing and business communities to meet the need of present and future county residents. In our opinion, the CTP cannot ignore the relationship between population increases and highway needs. All of the fisheries concerns identified above are equally true for commercial and residential development. In our opinion, the CTP should be truly comprehensive in addressing both the highway and human infrastructure related effects of rapid development in Brunswick County.

2. Losses of surface waters and wetlands, including freshwater wetlands, are not in the best interest of fishery resources. Guidance regarding appropriate mitigation of wetland losses is provided in a variety of sources familiar to the NCDOT and developers of the Brunswick County CTP. Accordingly, we believe that the CTP must include a comprehensive evaluation of anticipated wetlands and fishery habitat related losses and include specific information on how these losses will be addressed.

3. NMFS also believes that many of these losses should be addressed in advance of the impact. Comprehensive “upfront” surface water and wetland mitigation planning should be a component of the Brunswick County CTP. We anticipate that the EEP will participate in this process; however, the rapid development related situation in Brunswick County that lead to the need for a CTP may require resources beyond what is currently available. NMFS staff is available to assist in long-range mitigation planning for wetlands losses that support our trust resources. Also, a generic EFH assessment could assist in the identification of anticipated habitat losses and thereby provide additional guidance for a determination of the need for “upfront” mitigation.

Memo

To: Earlene Thomas
NCDOT Transportation Planning Branch

From: Dan Bell
The Nature Conservancy

Re: Brunswick County Comprehensive Transportation Plan
Review of NCDOT Environmental Features Mapping

Date: October 30, 2006

At the October 27 meeting of the Cape Fear Arch Conservation Collaboration, our group reviewed the "environmental features" mapping compiled by the NCDOT Transportation Planning Branch for Brunswick County. This memo and the attached maps represent the collective comments from these participants. In addition, some organizations have chosen to respond individually.

General Comments:

- Much of the data is out-of-date and does not reflect current conservation lands or priorities.
- The source of some data is unclear. Consequently, there was little opportunity to assess the data's credibility.
- NCDOT needs to get most recent data from NC Natural Heritage Program and environmental management agencies (i.e. Division of Coastal Management, Division of Marine Fisheries, Division of Water Quality).

Brunswick County Environmental Map "A"

1. Need updated NC Wildlife Resources Commission (NCWRC) coverage for "Gamelands". [Contact: NCWRC]
2. Need to add NCWRC "Black Bear Sanctuary", which covers tens of thousands of acres in central Brunswick County. [Contact: NCWRC]
3. Depiction of Green Swamp Gamelands is inaccurate. [Contact: NCWRC or The Nature Conservancy]
4. Add state-owned Gamelands along Waccamaw River. [Contact: NCWRC]
5. Need to update state-owned conservation lands at Boiling Spring Lakes Preserve. [Contact: The Nature Conservancy or NC Dept. of Agriculture]
6. Add proposed NC International Port property.
7. The federal land depicted is a switchyard for the Sunny Point Railroad. It does not have ecological value and should not be included in environmental maps.
8. The state-owned property behind Belville Elementary school has been sold to private developers and should not be depicted.
9. This map should include state held Clean Water Management Trust Fund easements. [Contact: NC Clean Water management Trust Fund]

Brunswick County Environmental Map “B”

1. Use most recent wetlands data [Contact: Brunswick County Planning Department and NC Division of Coastal Management]

Brunswick County Environmental Map “C”

1. Unable to assess accuracy because source data for map are unclear. In addition to using most recent wetlands data, NCDOT should integrate analysis by Brunswick County on soil suitability for development. [Contact: Brunswick County Planning Department and Brunswick County Soil & Water Conservation District]

Brunswick County Environmental Map “D”

1. Use most recent data for Anadromous Spawning Areas, Fish Nursery Areas consistent with NC Coastal Habitat Protection Plan (CHPP). Map should include DMF Oyster reef restoration sites. [Contact: NCDENR Division of Marine Fisheries]
2. Use most recent data for High Quality/ Outstanding Resource Waters [Contact: NCDENR Division of Water Quality]
3. Use most recent data for dedicated/ registered properties [Contact: NCDENR Natural Heritage Program]
4. Use most recent data for known archaeological sites. [Contact: NC Division of Cultural Resources]
5. The Waccamaw River, Juniper Creek and tributaries should be recognized as significant aquatic endangered species habitats. [Contact: NCDENR Natural Heritage Program and US Fish & Wildlife Service]
6. Bird Island is dedicated. [Contact: NCDENR Natural Heritage Program]
7. The Green Swamp dedication boundaries are not correct. [Contact: NCDENR Natural Heritage Program and The Nature Conservancy]
8. It is believed that there are dedicated/ registered properties on Town Creek. [Contact: NCDENR Natural Heritage Program and NC Coastal Land Trust]
9. Large portions of the Boiling Spring Lakes Preserve are dedicated. [Contact: NCDENR Natural Heritage Program and The Nature Conservancy]
10. Confirm that this is a registered/ dedicated property on Sunny Point Military Terminal. [Contact: NCDENR Natural Heritage Program and MOTSU]
11. Fort Fisher- Smith Island complex are dedicated. [Contact: NCDENR Natural Heritage Program and NCDENR Division of Coastal Management]
12. Bald Head Woods are dedicated. [Contact: NCDENR Natural Heritage Program, NCDENR Division of Coastal Management and Bald Head Island Conservancy]

Brunswick County Environmental Map “E”

1. This map should include any federal or state endangered/ threatened species, as well as any designated critical habitat.
2. Use most recent significant natural heritage area/ element occurrence data. [Contact: NCDENR Natural Heritage Program]

3. This map should include critical aquatic habitats as identified in the NC Wildlife Action Plan. [Contact: NC Wildlife Resources Commission]

Brunswick County Environmental Map “F”

1. Use most recent significant natural heritage area/ element occurrence data. [Contact: NCDENR Natural Heritage Program]
2. Managed Areas coverage should include 18,600-acre Juniper Creek Preserve. [Contact: The Nature Conservancy]
3. The federal land depicted is a switchyard for the Sunny Point Railroad. It does not have ecological value and should not be included in environmental maps.

Brunswick County Environmental Map “G”

1. Land trust priorities. What is the source of this data? The Cape Fear Arch Conservation Collaboration is currently refining our collective conservation priorities.
2. This map should include all DOT/EEP mitigation sites.
3. This map should include Audubon Important Birding Areas and the NC Birding Trail [Contact: NC Audubon and NC Wildlife Resources Commission]
4. This map should include all county/ city parks, Brunswick County Voluntary Agriculture District and all lands protected by farmland easements. [Contact: Brunswick County Parks and Brunswick County Soil & Water Conservation District]
5. This map should include Ducks Unlimited priority areas.
6. Managed Areas coverage should include 18,600-acre Juniper Creek Preserve. [Contact: The Nature Conservancy]
7. Ownership of Green Swamp Preserve is depicted incorrectly. [Contact: The Nature Conservancy]
8. Need to use most recent conservation ownership data on Town Creek. [Contact NC Coastal Land Trust]
9. Need to use most recent ownership data for Boiling Spring Lakes Preserve. [Contact: The Nature Conservancy]
10. This map should include land protected through Forest Legacy program on Town Creek. [Contact NC Coastal Land Trust]
11. New Hanover Soil and Water Conservation District and Town of Leland are focused on Eagle Island priority area.
12. Need to include Lockwood Folly River watershed management study area [Contact: NC Coastal Federation and Brunswick County Planning Dept.]